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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,194	03/16/2004	Jose De La Torre-Bueno	10225-061001/ src_ClientR	5119

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EXAMINER	
WANG, CLAIRE X	

ART UNIT	PAPER NUMBER
2624	

MAIL DATE	DELIVERY MODE
12/11/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,194	TORRE-BUENO, JOSE DE LA	
	Examiner	Art Unit	
	Claire Wang	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicants' response to the last Office Action, filed on September 19th, 2007 has been entered and made of record.

Response to Arguments

2. Applicant's arguments filed September 19th, 2007 have been fully considered but they are not persuasive.

a. In response to applicant's argument that "image analysis operations are not performed in the Taubman reference." It is noted that Taubman teaches an image in low resolution is displayed for the user and then when the user wants additional information from the image and input device is use to allow the user to click on the image and further request for additional detailing of the image is sent to the server (Col. 21, lines 46-56). Any form of image manipulation is considered to be image analysis, since the image is changed or analyzed.

b. In response to applicant's argument that there is no motivation suggested to undergo such analysis. It is noted that even though Taubman does not explicitly teach that the user is looking at a medical image, Bacus teaches a way for a viewer to request more magnification or higher resolution of microscope slide through a network to a server (Fig. 1). The examiner recognizes that obviousness can only be established by combining or modifying the teachings of

the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, both Taubman and Bacus teach transmitting images between client and server using a network. All the steps of the claimed invention are taught by Taubman with the exception of the compressed image being a medical image. This missing step is then taught by Bacus.

c. In response to applicant's argument that "the medical analysis of the original image is carried out at the first location such that the original medical image need not be sent outside the first location." It is noted that, Taubman teaches the server receives the request from the client and only send out the sections according to the ROI (Col. 21, lines 53-56). Thus the server (the first location as interrupted by the Examiner) never sends out the original image. The analysis of the original image is done right at the server location since it must determine which ROI to send out according to the client's request.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

4. Claims 17-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 17-24 define a computer program embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed computer program can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the "computer-readable medium" storing the program to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

5. For the purposes of furthering prosecution on claims 17-24, examiner will read the claim language to be "a computer-readable medium storing a computer program."

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-6, 9-14 and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taubman (US 6,778,709) in view of Bacus1 et al. (US 7,146,372 hereinafter "Bacus1").

As to claim 1, Taubman teaches a method comprising, generating a compressed image from a source image at a first location (server; Fig. 12, 502) using a lossy compression operation (Fig. 2 teaches the method of generating a layered embedded bitstream which is a lossy compression method, to be exact it is JPEG 2000 compression method); transmitting the compressed image to a remote view station at a second location for display (the server, after receiving the request for image, sends all of the low subband blocks to the client; Col. 21, lines 43-46); decompressing the compressed image file at the remote view station (the client receives the blocks and reconstructs a low resolution image of the entire image and the image is displayed; Col. 21, lines 47-49); selecting a region of the decompressed image at the second location (using an input device the user clicks on the region-of-interest, which

generates a request for the region to the server; Col. 21, lines 49-52); and at the first location, applying image analysis operations for diagnostic purposes (the user clicks on the region-of-interest because the user would like more information from the image; Col. 21, lines 49-52) to a region of the source image corresponding to the selected region of the decompressed image (the server receives the request from the client and sends the corresponding blocks of the region-of-interest to the client; Col. 21, lines 53-56). However, Taubman does not teach the image that is being compressed, transmitted and decompressed is a medical image.

Bacus1 teaches a way for a viewer to request more magnification or higher resolution of microscope slide through a network to a server (Fig. 1). Thus, Bacus1's system of the viewing microscope slides reads on the claimed medical image. Therefore it would have been obvious for one ordinarily skilled in the art at the time of the invention to combine image transaction system between server and client of Taubman with the microscope slide reading system of Bacus1 since both are very similar system that allows the user to request additional information from an area of interest.

As to claim 2, Taubman teaches wherein transmitting the compressed medical image includes transmitting the compressed medical image over a global packet-switched network (the network could be anything from a local area network to the internet; Col. 21, lines 5-6).

As to claim 3, Bacus1 teaches transmitting region information separate from the compressed medical image from the remote view station to an image server at the first location, wherein the region information defines the selected region of the displayed medical image (the X-Y coordinate information is specified in the data structure which enables X-Y translation of the specific image tiles and specific pixels within the image; Col. 22, lines 1-3).

As to claim 4, Bacus1 teaches wherein the region information comprises pixel coordinates (the X-Y coordinate information is specified in the data structure which enables X-Y translation of the specific image tiles and specific pixels within the image; Col. 22, lines 1-3).

As to claim 5, Taubman teaches at the first location, receiving from the remote view station a request for improved resolution of the selected region (server receives the request from the client the request for the region-of-interest; Col. 21, lines 51-54); determining image data to send to the remote view station to provide improved resolution of the selected region (the server accesses the blocks across different subband; Col. 21, lines 53-56); and sending said image data to the remote view station (sends the higher subband blocks to the client; Col. 21, lines 53-56).

As to claim 6, Bacus1 teaches wherein said determining the image data comprises identifying pixel data in the source image corresponding to the selected region in the displayed medical image (the X-Y coordinate information selected by the user is translated into specific image tiles or portions therein, the computer then takes the information and retrieves the stored image; Col. 22, lines 8-13).

As to claims 9-15, they are the system claims of method claims 1-6. Please see above for detail analysis.

As to claims 17-22, they are the computer-readable medium of method claims 1-6. Please see above for detail analysis.

8. Claims 7, 15 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taubman in view of Bacus1 as applied to claims 1-6, 9-14 and 17-22 above, and further in view of Burns (US 5,737,446).

As to claim 7, Taubman and Bacus1 do not teach wherein said determining the image data comprises calculating image data lost in the lossy compression operation. Burns teaches determining loss characteristics by obtaining lossy frequency domain (Fig. 3). Thus Burns's lossy determination reads on the claimed calculating image data loss. Therefore, it would have been obvious for one ordinarily skilled in the art at

the time of the invention to combine Burns with Taubman and Bacus11 in order to digitally enhance images (Burns Col. 2, lines 14-15).

As to claims 15 and 23, they are the system claim and computer-readable medium of claim 7. Please see above for detail analysis.

9. Claims 8, 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taubman in view of Bacus1 as applied to claims 1-6, 9-14 and 17-22 above, and further in view of Bacus et al. (US 6,226,392 hereinafter "Bacus2").

As to claim 8, Taubman and Bacus1 do not teach wherein applying the image analysis operations includes outputting a score and communicating the score to the remote view station for display. Bacus2 teaches a method for acquiring and reconstructing magnified specimen of medical images wherein the analysis of the issue outputs a numerical score on the display window (Col. 6, lines 29-36). Thus the numerical score of Bacus2 reads on the claimed outputting score. Therefore it would have been obvious for one ordinarily skilled in the art at the time of the invention was made to combine Bacus2 with Taubman and Bacus1 in order to make a more user friendly system.

As to claims 16 and 24, they are the system claim and computer-readable medium of claim 8. Please see above for detail analysis.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Claire Wang whose telephone number is 571-270-1051. The examiner can normally be reached on Mid-day flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Claire Wang
12/09/2007

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